Catalogue of American Amphibians and Reptiles.

HIGHTON, RICHARD. 1987. *Plethodon teyahalee.*

Plethodon teyahalee Hairston
Southern Appalachian slimy salamander

Plethodon glutinosus: Brimley, 1912:137 (part); Highton, 1970: 231 (part).

Plethodon jordani teyahalee Hairston, 1950:269. Type-locality, "an elevation of 4525 feet on Teyahalee Bald (=Johanna Bald) in the Snowbird Mountains on the boundary between Graham and Cherokee counties, North Carolina." Holotype, University of Michigan Museum of Zoology (UMMZ) 100807, an adult male collected on 23 August 1949, by Nelson G. Hairston (examined by author).

Plethodon jordani: Highton, 1962:329.

P[lethodon] teyahalee: Highton, 1984:7. First use of combination.

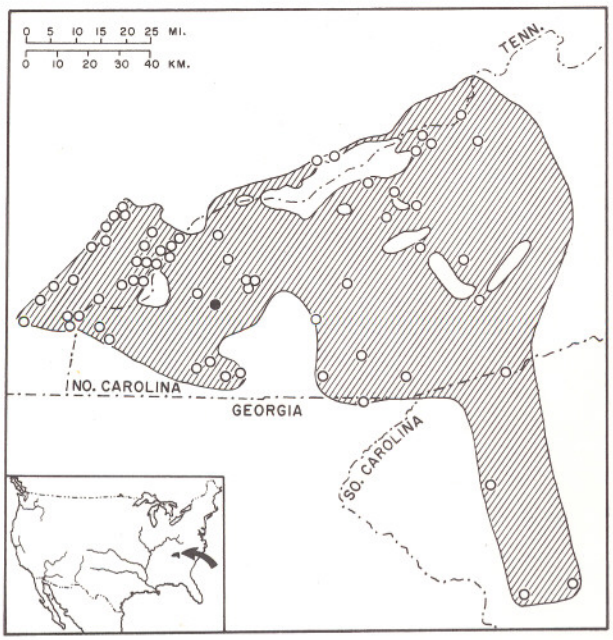
● CONTENT. No subspecies are recognized.

● DEFINITION. *Plethodon teyahalee* is a member of the *P. glutinosus* group of eastern *Plethodon* as defined biochemically by Highton and Larson (1979) and morphologically by Highton (1962). It is a large black salamander with very small dorsal and larger lateral white spots. The belly is slate gray and the chin is usually lighter than the belly. It usually has 17 trunk vertebrae. The species is characterized primarily on the basis of electrophoretically detectable biochemical differences as given in Highton (1984). It differs morphologically from some other members of the *P. glutinosus* complex by its large size (up to 100 mm body length and 207 mm total length), by the presence of very small white dorsal spots, the chin usually lighter than the belly and by the frequent presence of very small red spots on the legs.

● DESCRIPTIONS. The type series was described by Hairston (1950).

● ILLUSTRATIONS. There is a color photograph in Highton (1970: fig. 4A).

● DISTRIBUTION. The Blue Ridge physiographic province of southwestern North Carolina west of the French Broad River, and immediately adjacent Tennessee. It also occurs in northern Rabun County, Georgia and Oconee, Pickens and Anderson counties, South Carolina.



MAP. The solid circle shows the type locality. Hollow circles indicate other records that have been verified by electrophoretic analysis of proteins. Other probable records are shown in Highton (1970 fig. 5): white-spotted form west of the French Broad River. *Plethodon teyahalee* does not occur at highest elevations in the Unicoi, Nantahala, Balsam and Great Smoky Mountains.

● FOSSIL RECORD. None.

● PERTINENT LITERATURE. Hairston (1950) and Highton (1962, 1970, 1971, 1983) discussed the relationships of *P. teyahalee* with *P. jordani* and other members of the *P. glutinosus* complex. Highton (1970) suggested that the population from the type locality is of hybrid origin. Bailey (1937), Bishop (1941) and Highton (1970) suggested hybridization between *P. glutinosus* (=*P. teyahalee*) and some populations of *P. jordani* and Highton and Henry (1970) and Peabody (1978) demonstrated hybridization biochemically. Peabody (1978) and Highton (1983) made protein comparisons between geographic populations of *P. teyahalee* using the technique of electrophoresis and also made comparisons between *P. teyahalee* and other species with which it interacts ecologically, geographically and genetically (through hybridization). Hairston (1951) and Highton (1970) studied geographic variation in the altitudinal overlap of *P. teyahalee* and *P. jordani.* Dawley (1984a, 1984b, 1986a, 1986b) studied the recognition of individual, sex and species odors by *P. teyahalee.* Hairston (1980a, 1980b, 1981) did a field experimental study of competition between *P. teyahalee* and *P. jordani.* Nishikawa (1985a, 1985b) studied competition and the evolution of aggressive behavior in *P. teyahalee* and *P. jordani.* King (1939) and Huheey and Stupka (1967) provided information on the ecological distribution in the Great Smoky Mountains. Hairston (1983) provided information on the sizes of different age groups as did Highton (1970), although a few individuals of other members of the *P. glutinosus* complex were included in Highton's figure. Merchant (1972) studied population density and home range size. Powders (1970) studied protozoan parasites.

● ETYMOLOGY. The species is named for Teyahalee Bald (the type locality), North Carolina.

COMMENT

Individuals from the Snowbird Mountains, including those from the type locality of *P. teyahalee,* are of hybrid origin. It appears that *P. teyahalee* has swamped out an isolate of *P. jordani* that formerly must have occupied the Snowbird Mountains. Since the population at the type locality has more *P. teyahalee* genes (as determined by color pattern and electrophoretic analysis of proteins), the name is applicable to the species.

There are some other references to "*P. glutinosus*" in the southern Appalachian Mountains that are not included above. When the locality of collection is not precisely stated it cannot be determined whether or not the information refers to *P. teyahalee.* For example, Rankin (1937) listed the parasites of *P. glutinosus* from several counties of North Carolina. Some of these (from the Pisgah National Forest of Buncombe, Henderson and Transylvania counties) are very likely *P. teyahalee,* but since the parasites are not listed separately by locality of the host, some records probably are from other species of the *P. glutinosus* complex in other parts of the state. Similarly, Weller (1931) gave the food items found in the stomach of a specimen from the "foot of Mt. LeConte," in the Great Smoky Mountains of Tennessee. Since both *P. glutinosus* and *P. teyahalee* occur at lower elevations on the western slope of this mountain it is impossible to know to which species this information applies. Only if the exact sites of collection were known would it be possible to obtain living material for a determination of the color of the dorsal spots of this population or for an electrophoretic identification of its proteins. A morphometric study of variation in all the species of the *P. glutinosus* group is needed to determine any differences which may be useful in identifying preserved museum specimens.

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